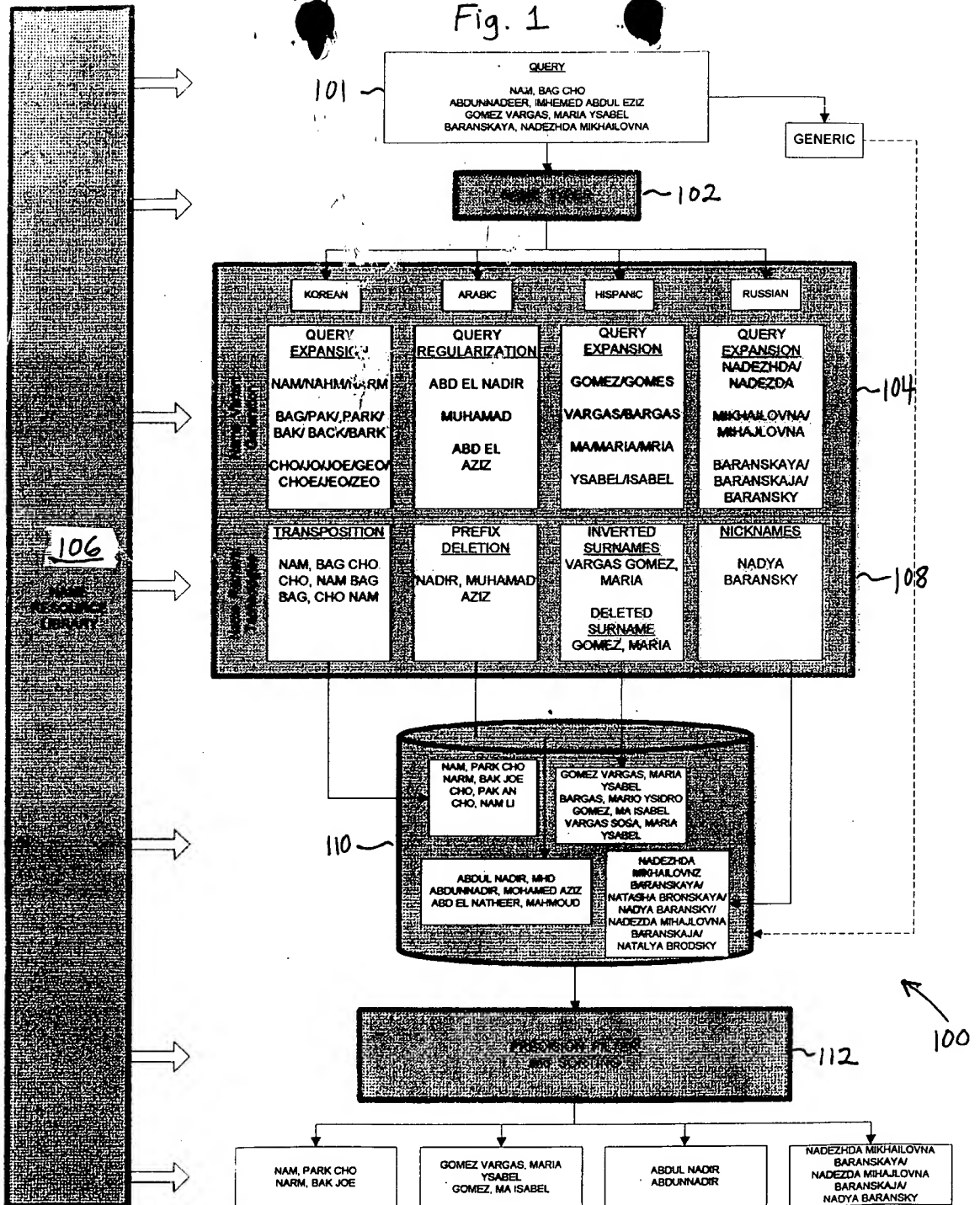


Fig. 1



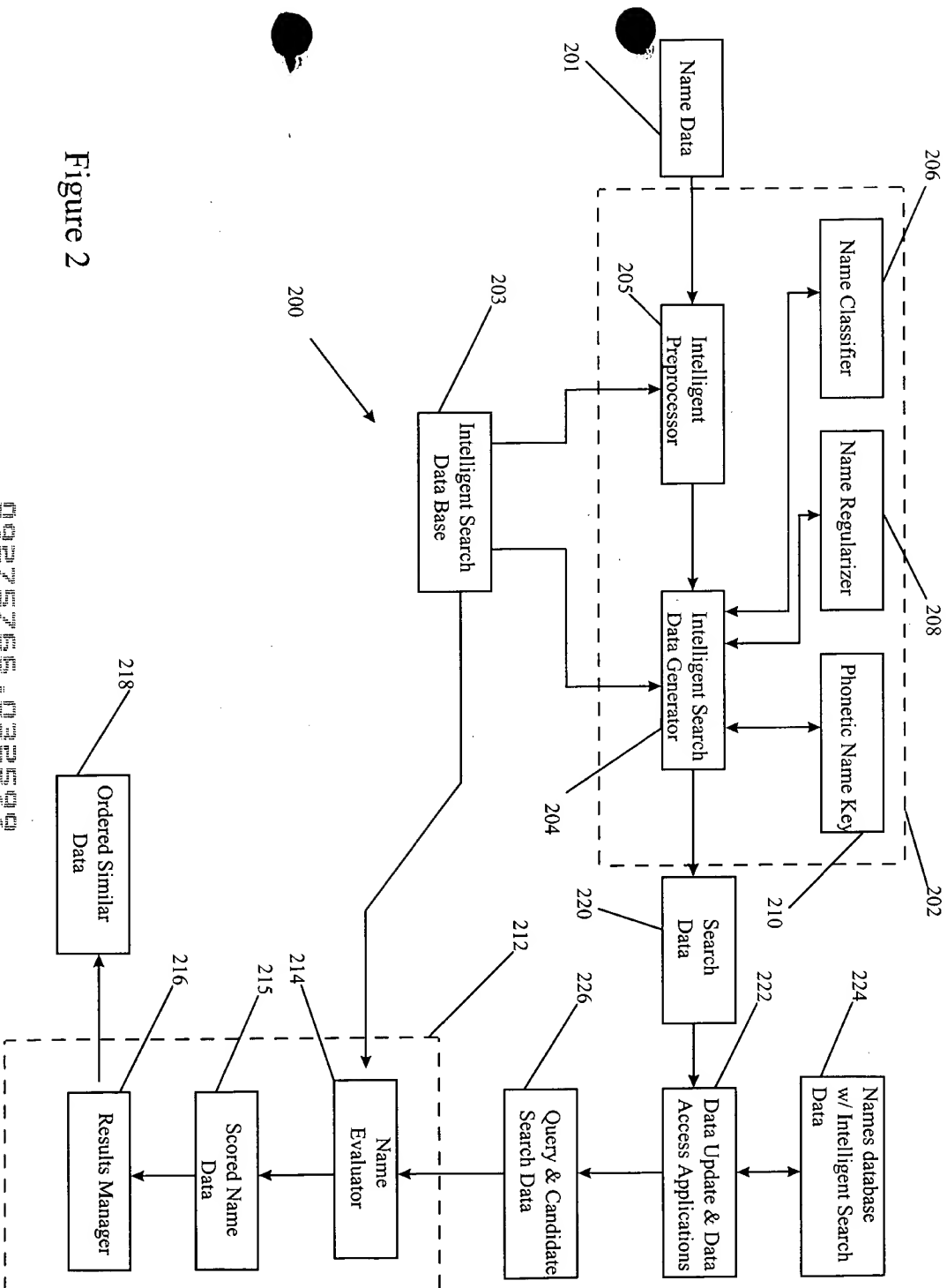
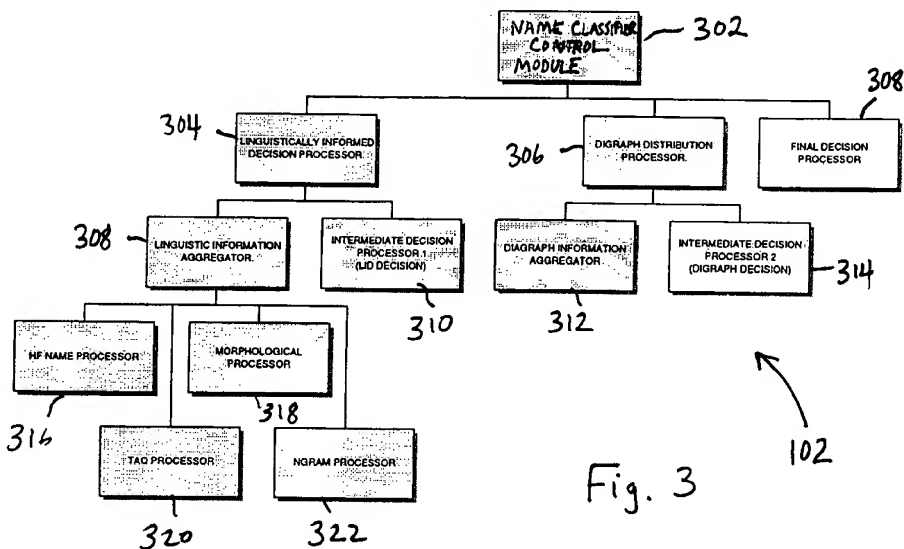


Figure 2

09275766-032699



Data Sources
HF
TAQ
N-Gram
Morpho

Parameters (16)
HF
TAQ
N-Gram
Morpho
In & out of field
GN & SN
for each data source

Thresholds
LID Thresholds
...

Transaction
SN GN COB

Create ANC Input

Linguistically Informed Decision Processor (LID)

Linguistic Information Aggregator (LIA)

Arabic Score: {1..∞}
Hispanic Score: {1..∞}
'Other' Score: {1..∞}

Intermediate Decision Processor I (IDP1)

Other: (T,F)
Hispanic: (T,F)
Arabic: (T,F)

Digraph Distribution Processor

State of Information Stored

CLASS	Transaction
Nureidin Bin Jaffar	Mahmoud Taufiq AFGH

LIA produces detailed scoring information (see LIA detailed diagram)

After LID operates on results of LIA

Nureidin Bin Jaffar	Mahmoud Taufiq AFGH
Arabic Score: 71	
Hispanic Score: 2	
'Other' Score: 10	

Result of IDP1

Nureidin Bin Jaffar	Mahmoud Taufiq AFGH
Arabic:	T
Hispanic:	F
Other:	F

Name is identified as Arabic.
This result is returned for query/add routing purposes.

Fig. 4

Fig. 4

LIA Data Stores

High Frequency				N-Grams			
H	S	Garcia	3	H	S	S	ndez 3
H	S	Salazar	2	H	S	G	far 1
H	S	Sambrano	1	A	B	P	hous 1
A	B	Mahmoud	4	A	B	S	fiq 2
A	B	Jaffar	2	O	S	E	agio 1
O	S	Silvestri	1	O	S	I	ahmo 5

Morphology				TAO			
A	B	S	addin 2	H	S	de	1
A	B	S	edin 3	H	S	la	1
A	B	S	uddin 3	H	S	las	1
O	S	P	etto 1	A	B	bjn	3
O	S	S	etti 2	O	B	el	1
O	S	S	ini 1	O	B	lo	1

Digraph Distribution Processor Data Stores

Digraphs		
A	ez	-1.0422
A	nt	22.8733
A	bd	38.7221
H	bd	1.0572
H	ez	42.5947
H	ri	16.1242

Trigraphs		
A	ez#	-10.0422
A	#nt	-48.1743
A	bd#	48.4551
H	bd#	-32.1742
H	ez#	47.5327
H	#ri	11.1242

Digraph Processor Parameters	
A	44.2331
H	-32.8765

LID Parameters			
HFNAME	S	10	8
HFNAME	G	8	6
TAO	S	5	3
TAO	G	4	2
MORPHOLOGY	S	5	3
MORPHOLOGY	G	4	2
NGRAM	S	4	3
NGRAM	G	3	2

Threshold Parameters			
A	50	1.4532	10 8
H	73	20.5000	5 6
O	38	(null)	100 3

Fig. 5

00275766-032500

09275766-032599

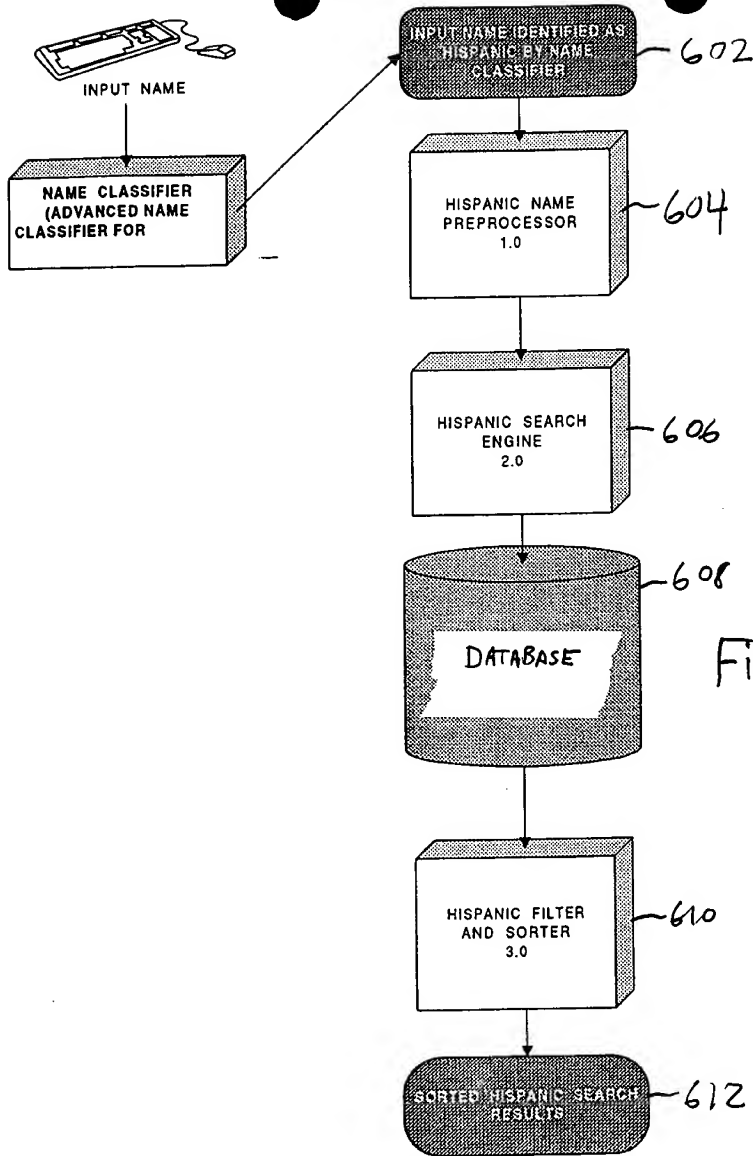


Fig. 6

INPUT NAME IDENTIFIED AS
HISPANIC BY NAME
CLASSIFIER

NAME LENGTH
DETERMINER
(NLD)

702

HISPANIC
SURNAME
SEGMENTER
(HSS)

704

HIGH
FREQUENCY
SURNAME
TYPE DATA
STORE

HISPANIC
TITLE/AFFIX/
QUALIFIER
PROCESSOR
(HTP)

706

HISPANIC
TITLE/AFFIX/
QUALIFIER
DATA STORE

HISPANIC
SEGMENT
POSITIONER
(HSP)

708

HIGH
FREQUENCY
SURNAME
TYPE DATA
STORE

HISPANIC
NAME
FORMATTER
(HNF)

710

SEGMENT
POSITION
IDENTIFIER
(SPI)

712

HISPANIC
GENDER
IDENTIFIER
(HGI)

714

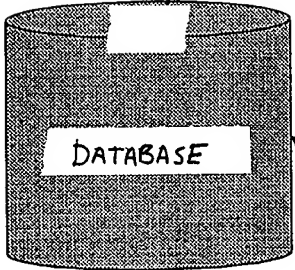
HIGH
FREQUENCY
GIVEN NAME
TYPE DATA
STORE

FREQUENCY
PATH
DIRECTOR
(FPD)

716

HIGH
FREQUENCY
SURNAME
TYPE DATA
STORE

Fig. 7



604

00275766-022500

